



Amendment in response to Office Action dated
11/4/2002

Serial No.: 09/839,562

Pennie & Edmonds LLP: (202) 496-4400

Filed: April 20, 2001

Attorney Docket: 8932-268

Inventor: T. Wilford *et al.*

Date: March 4, 2003

For: GRAFT FIXATION SYSTEM AND METHOD

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APPENDIX A

Claims pending in the application: 1, 3, 5, 7-15, 17-20 and 24-32

Claims withdrawn from application: 2, 4, 6, 16, and 21-23

Claims rejected: 1, 3, 5, 7-11, 17-20 and 24

Claims objected to: 12-15.

New claims: 25-32

PENDING CLAIMS

1. A fixation device for securing one end of a graft to bone, said device comprising:

an implant body having first and second ends, the first end having an opening configured and adapted to receive an insertion tool and the second end having a recess; and
a graft interface member having a graft holding portion and an implant coupling portion, at least a portion of the coupling portion is configured and adapted to be received in the recess to permit the implant body to rotate independently of the graft interface member;

wherein the graft holding portion has a central longitudinal axis and is configured and adapted to hold a graft aligned with the central longitudinal axis.

3. The fixation device according to claim 1 wherein the graft holding portion comprises a cage.

5. The fixation device according to claim 3 wherein the cage comprises a cage bottom portion and a cage top portion attachable to the cage bottom portion.

7. The fixation device according to claim 1 wherein the implant coupling portion comprises a flexible post.

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8. The fixation device according to claim 7 wherein the flexible post has a flared tip portion.

9. The fixation device according to claim 8 wherein the flared tip portion is slotted.

10. The fixation device according to claim 1 wherein the recess in the second opposed end of the implant body has an undercut section.

11. The fixation device according to claim 1 wherein implant body and the graft interface member are integrally connected to each other.

12. The fixation device according to claim 5 wherein the cage top portion comprises at least one detent configured and adapted to attach the cage top portion to the cage bottom portion.

13. The fixation device according to claim 12 wherein the cage bottom portion has at least one fitting configured and adapted to receive the detent.

14. The fixation device according to claim 5 wherein the bone cage has at least one wall portion and at least one opening through the at least one wall portion.

15. The fixation device according to claim 14 wherein the at least one wall portion has an interior surface comprising serrations.

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17. The fixation device according to claim 1 wherein the opening in the first opposed end of the implant body is hexagonal.

18. The fixation device according to claim 1 wherein the opening in the first opposed end of the implant body includes an internally threaded portion.

19. The fixation device according to claim 17 wherein the hexagonal opening in the first opposed end of the implant body tapers to an internally threaded portion.

20. The fixation device according to claim 1 wherein the implant body has an outer surface at least a portion of which contains threads for implantation into bone.

24. A method of attaching a graft to bone in a surgical procedure wherein a tunnel is formed in bone, comprising the steps of:

providing a fixation device having a body portion integrally connected to a graft interface portion, wherein the body portion is rotatable with respect to the graft interface portion and wherein the fixation device has a central longitudinal axis;

providing a graft having first and second opposing ends;

attaching the first end of the graft to the graft interface portion of the fixation device along the central longitudinal axis;

attaching the fixation device within the bone tunnel;

affixing the second end of the graft to bone while maintaining tension in the graft; and

adjusting the tension in the graft by turning the body portion in the bone tunnel without imparting substantial twist to the graft.

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25. (New) The device of claim 1, wherein the implant coupling portion is received in the recess from the second end of the implant.

26. (New) The device of claim 1, wherein the graft holding portion comprises a cage having at least two separate members.

27. (New) The device of claim 26, wherein the cage has a first member and a second member, the first and second members being configured and dimensioned to mate.

28. (New) The device of claim 27, wherein the first member and the second member snap together.

29. (New) A method of attaching a graft to bone in a surgical procedure wherein a tunnel is formed in bone, comprising the steps of:

providing a fixation device having a body portion integrally connected to a graft interface portion having first and second surfaces, wherein the body portion is rotatable with respect to the graft interface portion;

providing a graft having first and second opposing ends;

trapping the first end of the graft between the first and second surfaces;

attaching the fixation device within the tunnel;

affixing the second end of the graft to bone while maintaining tension in the graft; and

adjusting the tension in the graft by turning the body portion in the tunnel without imparting substantial twist to the graft.

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30. (New) The method of claim 29, wherein the step of trapping the first end of the graft between the first and second surfaces comprises compressing the first end of the graft with the first and second surfaces.

31. (New) The method of claim 29, wherein the step of trapping the first end of the graft between the first and second surfaces comprises deforming the first and second surfaces.

32. (New) The method of claim 31, wherein deforming the first and second surfaces comprises crimping.